UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

In the Matter of:	)	
	)	
Confederated Tribes of Warm Springs,	)	
	)	
Respondent	)	Docket No. SDWA-10-2019-0077
	)	
Warm Springs Public Water System (ID# 104101247)	)	EMERGENCY ADMINISTRATIVE ORDER
	)	
	)	
	)	

I. AUTHORITY

1.1. This Emergency Administrative Order ("Order") is issued pursuant to the authority vested in the Administrator of the U.S. Environmental Protection Agency ("EPA") by Section 1431(a) of the Safe Drinking Water Act ("SDWA"), 42 U.S.C. § 300i(a). The Administrator has delegated this authority to the Regional Administrator, Region 10, who in turn delegated this authority to the Director of the Enforcement and Compliance Assurance Division.

1.2. The EPA has primary enforcement responsibility for the SDWA public water supply protection program on the Warm Springs Reservation. No other governmental authority has applied for or been approved to administer the SDWA public water supply protection program on the Warm Springs Reservation.

1.3. The EPA may issue an order pursuant to Section 1431(a) of SDWA, 42 U.S.C. § 300i(a), when a contaminant is present in or is likely to enter a public water system or an underground source of drinking water, which may present an imminent and substantial endangerment to the health of persons, and appropriate state and local authorities have not

acted to protect the health of such persons.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

2.1. The Confederated Tribes of Warm Springs ("Respondent") owns and operates the Warm Springs Public Water System ("System"), located on the Warm Springs Reservation, that provides water for human consumption.

2.2. Respondent is a "person" within the meaning of Section 1401(12) of SDWA, 42 U.S.C. § 300f(12), and 40 C.F.R. § 141.2 for purposes of federal enforcement under the SDWA.

2.3. The System serves approximately 3,800 persons, including 1,356 residential connections and numerous tribal facility connections serving office buildings, at least one day care, at least two schools, at least one senior center, and at least one medical center.

2.4. The System is a public water system within the meaning of Section 1401(4) of SDWA, 42 U.S.C. § 300f(4), and 40 C.F.R. § 141.2.

2.5. The System regularly serves at least 25 year-round residents and is therefore a "community water system" within the meaning of Section 1401(15) of SDWA, 42 U.S.C. § 300f(15), and 40 C.F.R. § 141.2.

2.6. Respondent owns and operates the System and therefore is a "supplier of water" within the meaning of Section 1401(5) of SDWA, 42 U.S.C. § 300f(5), and 40 C.F.R.§ 141.2. Respondent is subject to the requirements of Part B of the SDWA, 42 U.S.C. § 300g, and its implementing regulations, 40 C.F.R. Part 141.

2.7. The System is solely supplied by surface water from the Deschutes River, which draws from a watershed with numerous potential agricultural, municipal, and industrial contaminant sources. The raw water is treated with conventional filtration at the System's Dry

Creek Treatment Plant ("Plant"). The Plant accomplishes turbidity reduction by a number of treatment processes, which include coagulation/flocculation, sedimentation and filtration. These treatment processes are provided in series to remove turbidity, cysts, and other microorganisms. Coagulant is added to the water downstream of the raw water pumps, which reacts with turbidity particles and forms a floc for removal in the filter. The Plant then injects chlorine gas to disinfect the water before it enters the distribution system.

2.8. The Plant was constructed in 1980; though, some equipment was upgraded in 2000. Due to the System's age, many components of the Plant are in poor or severely poor condition. As a result, a number of failures in treatment processes and distribution networks have created conditions for potential water contamination incidents to occur. The Plant condition impairs the System's ability to consistently provide safe drinking water. Even though a new treatment plant is in the design phase, the current Plant will need to function and provide safe drinking water for, at least, the next five years until a new facility is constructed and on-line.

2.9. On November 28, 2018, EPA sent the Respondent a letter advising Respondent to take the following actions to address threats to public health: 1) recalibrate or replace the turbidimeter at Individual Filter Effluent ("IFE") #2 and maintain records of turbidity monitoring and calibration; 2) remove solids from the settling tank due to potential for build up to cause pathogens to enter the treated water; and 3) develop a standard operating procedure ("SOP") to ensure proper coagulation and maintain a log of the SOP's implementation.

2.10. In the November 28, 2018 letter, EPA also provided Respondent notice regarding significant deficiencies pursuant to 40 C.F.R.§ 141.723(b) following EPA's July 2018 sanitary survey of the System.

2.11. Respondent failed to either correct the significant deficiencies or provide an

approved corrective action plan within the 45 days required by 40 C.F.R.§ 141.723(c). This resulted in Respondent incurring treatment technique violations. Moreover, many of the same significant deficiencies noted and communicated to Respondent in 2018 were also cited and communicated previously in the 2015 sanitary survey; however, Respondent never addressed the 2015 significant deficiencies.

2.12. Respondent provided evidence that some turbidimeters were calibrated in December 2018, but IFE #2 remains unreliable and without proper calibration. The turbidimeters manufacturer's specifications require the turbidimeters to be calibrated quarterly; EPA's recommendation is monthly. The EPA only has information that Respondent calibrated the turbidimeters once in April of 2016 and not at all since this date.

2.13. On April 7-9, 2019, the System had three consecutive days of high turbidity, the highest of which was 3.88 nephelometric turbidity units ("NTU"). Respondent did not inform EPA until April 11, 2019, though 40 C.F.R.§ 141.202(a) requires consultation with the primacy agency within 24 hours of exceeding the maximum of 1 NTU at any time. After consultation with EPA, Respondent agreed to issue a boil water notice ("BWN"), which was in effect from April 11, 2019 until April 15, 2019. On April 15, 2019, EPA notified Respondent that EPA agreed the BWN could be lifted because measurements showed that the turbidity fell below 0.3 NTU and sampling results were negative for both total coliform and *E. coli*. The EPA also confirmed that Respondent issued the required Tier 1 Public Notice on the same day EPA was notified.

2.14. On April 23, 2019, the System experienced a high turbidity reading of 1.4 NTU. Respondent informed EPA within 24 hours of exceeding the maximum of 1 NTU, as required. After consultation with EPA, Respondent agreed to issue a BWN, which was in effect from April

23, 2019 until April 24, 2019. On April 24, 2019, EPA notified Respondent that EPA agreed the BWN could be lifted because measurements showed that the turbidity fell below 0.3 NTU and sampling results were negative for both total coliform and *E. coli*. EPA confirmed that Respondent issued the required Tier 1 Public Notice on the same day EPA was notified.

2.15. The EPA has information that even when the Respondent issues BWNs, at least some of the System's customers ignore the BWNs and proceed to drink and use the water without taking the proper precautions outlined in the BWNs.

2.16. High levels of turbidity increase the likelihood that drinking water may contain disease-causing organisms, such as cryptosporidium, giardia, and *E. coli* because particles of turbidity provide shelter for microbes and reduce the microbes exposure to disinfectants. Therefore, if particulate material is not removed, a high turbidity event can provide shelter for and promote regrowth of pathogens in the water, leading to outbreak of waterborne diseases.

2.17. In addition to other issues, Respondent's distribution system associated with the Plant is failing and/or in disrepair. Since December 2018, Respondent has had four water main breaks in its distribution system, two breaks on the distribution line near Shitike Creek, one break in the Tenino apartment complex, and one break in Greely Heights.

2.18. On November 4, 2018, the System had a water main line break near the Shitike Creek Crossing. As a result, a loss of pressure event occurred causing significant reduction in the water level of the main reservoir (Tee Wee Butte Reservoir).

2.19. On November 5, 2018, after consultation with EPA and Warm Springs Health Department, Respondent agreed to issue a BWN that remained in effect until November 13, 2018.

2.20. On May 15, 2019, the System had another water main line break near the same Shitike Creek Crossing. After consultation with EPA and Warm Springs Health Department on

the same day, Respondent agreed to issue a BWN that remained in effect until May 22, 2019.

2.21. The EPA has reports of numerous leaks in the Respondent's drinking water distribution system. The EPA also has information regarding the lack of timely repairs, or no repairs at all, to the multiple and pervasive leaks in Respondent's drinking water distribution system. Leaks, similar to line breaks, can lead to low-pressure and even loss of pressure events.

2.22. Low-pressure and loss of pressure in a drinking water distribution system may cause a net movement of water from outside the pipe to the inside of the pipe through cracks, breaks, or loose joints, common in varying degrees all distribution systems. Backsiphonage occurs when pressure is lost in pipes, creating a negative pressure and a partial vacuum, which pulls water from a contaminated source outside the pipe into the treated, potable water inside the pipe. This creates a suitable environment for bacteriological contamination and other disease-causing organisms including *E. coli* to enter the water distribution system downstream of the treatment plant, which then gets delivered to users.

2.23. *E. coli* are bacteria whose presence indicates that water may have been contaminated with human and/or animal wastes. Human and/or animal wastes can contain pathogens, which can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. Pathogens may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.

2.24. The EPA also has reports that valve boxes in several areas of the distribution system have flooded with drinking water due lack of maintenance and a general state of disrepair.

2.25. Poorly maintained and flooded valve boxes impair a water system's ability to respond effectively to leaks in lines and/or water main breaks.

2.26. In addition to other issues, the System has failed to maintain adequate microbial

treatment by failing to maintain the minimum required residual disinfectant concentration at the point of entry into the distribution system and also throughout the distribution system. The Surface Water Treatment Rule requires that the minimum residual concentration must not drop below 0.2 mg/l for more than four hours as required by 40 C.F.R.§ 141.72(b)(2). The monthly operator report for March 2019 shows that free chlorine levels, known as chlorine residual, fell below the required 0.2 mg/l for more than four hours every day from March 16, 2019 through March 23, 2019. This failure to maintain adequate residual chlorine resulted in an acute treatment technique violation.

2.27. Minimum residual disinfectant is required for adequate inactivation of giardia, bacteria (including *E. coli*), parasites, and viruses that may cause symptoms such as nausea, cramps, diarrhea, and associated headaches. The presence of free chlorine correlates to the absence of many disease-causing organisms and thus is a critical measure of the safety of the drinking water.

2.28. The EPA has determined that conditions exist at the System that may present an imminent and substantial endangerment to the health of persons, based on the facts indicated above, and State and local authorities have not acted to protect the health of such persons.

2.29. The EPA has determined that the actions specified in this Order are necessary to protect the health of persons.

III. ORDER

INTENT TO COMPLY

3.1. Within one business day of the Effective date of this Order, Respondent shall notify EPA in writing of its intent to comply with terms of the Order. Notification by e-mail to EPA point of contact identified in Paragraph 3.31 below is acceptable.

EVENT RESPONSE PROVISIONS

3.2. In the future event where the Plant's Combined Filter Effluent ("CFE") measurements are greater than or equal to 0.3 NTU in at least 95% of the measurements taken every four hours in a calendar month period, Respondent will take the following actions:

a. Respondent shall consult with EPA within 24 hours to determine if a BWN and/or provision of alternate water is required.

b. Should EPA determine that a BWN and/or provision of alternate water is required, Respondent shall continue that action until it has received written approval from EPA to do otherwise.

c. Respondent shall issue a Tier 2 public notice as required by 40 C.F.R. § 141.203.

d. Respondent shall collect consecutive daily (one sample per calendar day) special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the System's distribution system at sampling locations provided by EPA. Respondent shall ensure that each sample is analyzed for total coliform and chlorine residual.

e. Respondent shall provide EPA with chlorine residuals results recorded every two hours at the entry point (finished water) to the distribution system and throughout the System's distribution system for the entire calendar month period.

f. Respondent shall provide EPA with continuous measured data from all IFEs for the entire calendar month period.

g. Respondent shall provide CT calculations (disinfectant concentration multiplied by time), as measured prior to the first customer, at least twice a day for the entire calendar month period.

h. Respondent shall provide the pH of the disinfected water, which must be measured at the same location and time as the residual chlorine.

3.3. In the future event where any of the Plant's IFE measurements (as recorded every 15 minutes) are greater than or equal to 0.5 NTU in at least 95% of the measurements in a calendar month period, Respondent will take the following actions:

a. Respondent shall perform an IFE performance investigation and provide EPA with a finding report no later than 30 calendar days following the month after the turbidity event.

b. Respondent shall provide EPA with chlorine residuals results recorded every two hours at the entry point (finished water) and throughout the System's distribution system for the entire calendar month period.

3.4. In the future event where the System's IFE measurement is greater than 1.0 NTU in two consecutive measurements (as recorded every 15 minutes) for three consecutive months, or greater than 2.0 NTU in two consecutive 15-minute measurements, Respondent will take the following actions:

a. Respondent shall notify EPA within 24 hours to determine next steps which may include a Comprehensive Performance Evaluation of the treatment plant and a filter self- assessment evaluation that must consist of at least the followings: i) assessment of filter performance, ii) development of a filter profile, iii) identification and prioritization of factors limiting filter performance, and iv) correction action plan to address the issue.

3.5. In the future event where any turbidity measurements of the Plant's CFE exceed 1.0 NTU, Respondent will take the following actions:

a. Respondent shall consult with EPA within 24 hours to determine if a BWN and/or

provision of alternate water is required.

b. Should EPA determine that a BWN and/or provision of alternate water is required, Respondent shall continue that action until it has received written approval from EPA to do otherwise.

c. Respondent shall issue a Tier 1 public notice as required by 40 C.F.R. § 141.202.

d. Once the System's CFE turbidity is less than 0.3 NTU (post filtration), Respondent shall flush the System and any affected storage tanks that are part of the System to avoid potentially contaminated water being distributed to users, and then disinfect the System to maintain at least 0.2 ppm disinfectant residual at the entry point (finished water) and throughout the System's distribution system.

e. Within 24 hours after flushing and disinfecting the System as required above, Respondent shall collect consecutive daily (one sample per calendar day) special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the System's distribution system at sampling locations provided by EPA. Respondent shall ensure that each sample is analyzed for total coliform, *E. coli*, and chlorine residual.

f. After Respondent receives written notification from EPA that it may discontinue weekly total coliform sampling, Respondent shall thereafter resume monthly total coliform sampling as required by 40 C.F.R. § 141.853-857.

g. Respondent shall provide EPA with chlorine residuals results as measured at the entry point to the System and in the System's distribution for ten calendar days

preceding and following the event.

h. Respondent shall provide EPA with continuous measured data from all IFEs for ten calendar days preceding and following the event.

i. Respondent shall provide CT calculations (disinfectant concentration multiplied by time) at least twice a day to demonstrate four log inactivation for ten calendar days before and after the event prior to the first customer.

j. Respondent shall provide the pH of the disinfected water as must be measured at the same location and time as the residual chlorine for ten calendar days preceding and following the event.

3.6. In the future event where any turbidity measurements of the Plant's CFE exceed 2.0 NTU, Respondent will take the following actions:

a. Respondent shall immediately issue a BWN and consult with EPA within 24 hours to determine if alternate water is required.

b. Respondent shall continue that BWN and provision of alternate water, if required, until it has received written approval from EPA to do otherwise.

c. Respondent shall issue a Tier 1 public notice as required by 40 C.F.R. § 141.202.

d. Once the System's CFE turbidity is less than 0.3 NTU (post filtration), Respondent shall flush the System and any affected storage tanks that are part of the System to avoid potentially contaminated water being distributed to users, and then disinfect the System to maintain at least 0.2 ppm disinfectant residual at the entry point (finished water) and throughout the System's distribution system.

e. Within 24 hours after flushing and disinfecting the System as required

above, Respondent shall collect consecutive daily (one sample per calendar day) special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the System's distribution system at sampling locations provided by EPA. Respondent shall ensure that each sample is analyzed for total coliform, *e.Coli*, and chlorine residual.

f. After Respondent receives written notification from EPA that it may discontinue weekly total coliform sampling, Respondent shall thereafter resume monthly total coliform sampling as required by 40 C.F.R. § 141.853-857.

g. Respondent shall provide EPA with chlorine residuals results as measured at the entry point to the System and in the System's distribution for ten calendar days preceding and following the event.

h. Respondent shall provide EPA with continuous measured data from all IFEs for ten calendar days preceding and following the event.

i. Respondent shall provide the pH of the disinfected water as must be measured at the same location and time as the residual chlorine for ten calendar days preceding and following the event.

j. Respondent shall provide EPA a self-evaluation of the coagulation process to include a log of Coagulation SOP implementation, coagulation dosage, and type of coagulant used.

k. Respondent shall provide EPA a self-assessment evaluation of CFE and IFE to include: i) assessment of filter performance, ii) development of a filter profile, iii) identification and prioritization of factors limiting filter

performance, and iv) correction action plan to address the issue. If Respondent determines that any single IFE fails to record filtration rate, Respondent shall take grab samples every four hours for five calendar days and provide those results to EPA.

l. Respondent shall provide CT calculations (disinfectant concentration multiplied by time) at least twice a day to demonstrate four log inactivation for ten calendar days before and after the event prior to the first customer.

3.7. In the future event where the System's chlorine residual falls below 0.2 as measured at the entry point (finished water to the distribution system) for more than four consecutive hours, Respondent will take the following actions:

a. Respondent shall consult with EPA within 24 hours to determine if a BWN and/or provision of alternate water is required.

b. Should EPA determine that a BWN and/or provision of alternate water is required, Respondent shall continue that action until it has received written approval from EPA to do otherwise.

c. Respondent shall issue a Tier 1 public notice as required by 40 C.F.R. § 141.202.

d. Once the System's chlorine residual is above 0.2 as measured at the entry point (finished water) to the distribution system and throughout the System's distribution system, Respondent shall flush the System including any affected storage tanks that are part of the System to avoid potentially contaminated water being distributed, and then disinfect to maintain at least 0.2 ppm disinfectant residual at the entry point (finished water) and throughout the System's distribution system.

e. Within 24 hours after flushing and disinfecting the System as required above, Respondent shall collect consecutive daily (one sample per calendar day) special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the System's distribution system at sampling locations provided by EPA. Respondent shall ensure that each sample is analyzed for total coliform and chlorine residual.

f. Respondent shall provide EPA with chlorine residuals as measured at the entry point (finished water) to the distribution system and throughout the System's distribution system for ten calendar days before and after the event.

g. Respondent shall provide CT calculations (disinfectant concentration multiplied by time) at least twice a day to demonstrate four log inactivation to the first customer for ten calendar days before and after the event.

h. Respondent shall provide EPA with daily chlorine dosage used by the System for ten calendar days before and after the event.

i. Respondent shall provide the pH of the disinfected water as must be measured at the same location and time as the residual chlorine for ten calendar days preceding and following the event.

j. Respondent shall provide EPA with temperature readings for water before chlorination for ten calendar days before and after the event.

k. Respondent shall provide EPA with turbidity readings at all IFEs for ten calendar days before and after the event.

l. Respondent shall provide EPA a self- assessment evaluation of the disinfectant being used to include a description disinfectant, dosage, process used, and

compatibility analysis with related equipment.

3.8. In the future event where the System experiences breaks in water lines or other low pressure or loss of pressure events likely to cause contamination in the System's distribution system, Respondent will take the following actions:

a. Respondent shall consult with EPA within 24 hours to determine if a BWN and/or provision of alternate water is required.

b. Should EPA determine that a BWN and/or provision of alternate water is required, Respondent shall continue that action until it has received written approval from EPA to do otherwise.

c. Respondent shall issue a Tier 1 public notice as required by 40 C.F.R. § 141.202.

d. Respondent shall immediately repair the line break.

e. Once the break is repaired, Respondent shall flush the System and any affected storage tanks that are part of the System to avoid potentially contaminated water being distributed, and then disinfect to maintain at least 0.2 ppm disinfectant residual at the entry point (finished water) and throughout the System's distribution system.

f. Within 24 hours after making repair to the water line as required above, Respondent shall collect consecutive daily (one sample per calendar day) special purpose samples (bacteriological and microbial) (defined in 40 C.F.R. § 141.21(a)(6)) from the System's distribution system at sampling locations provided by EPA. Respondent shall ensure that each sample is analyzed for total coliform and chlorine residual.

g. After Respondent receives written notification from EPA that it may

discontinue weekly total coliform sampling, Respondent shall thereafter resume monthly total coliform sampling as required by 40 C.F.R. § 141.853-857.

3.9. Respondent shall provide EPA with a completion report within three business days of the resolution of each event in Paragraph 3.2. to 3.8. The completion reports will include a description of how Respondent became aware of the situation, corrective measures taken, and process changes implemented to prevent similar future events.

3.10. No later than 48 hours after the final measurement is taken, Respondent shall provide EPA any data required in Paragraphs 3.2 to 3.8.

3.11. Respondent remains obligated to comply with all applicable requirements of 40 C.F.R. Part 141.

3.12. The EPA may require Respondent to increase turbidity, total coliform, and chlorine residual monitoring.

ALTERNATE WATER SUPPLY

3.13. Respondent must develop an Alternative Water Supply Plan (AWSP) wherein Respondent details how and where it will provide at least two liters of potable water per day, per person. This per person daily allotment of alternate water must be made accessible to all persons served by the System. Additionally, the AWSP will outline how it plans to inform every person served by the System when an alternate water supply is made available. Respondent shall designate the contact information (e.g. phone number, email address) of Respondent's designated employee or agent for anyone served by the System who may have questions about the availability of the alternate water supply. Respondent may opt, as part of its AWSP, to provide an alternate water supply that is: 1) provided by a licensed water distributor, 2)

purchased bottled water, or 3) provided by another public water system that meets the requirements of the SDWA. Any alternate water supply shall be made available at no cost to all users of the System as needed for drinking, cooking, oral hygiene, and dish washing until safe drinking water service is restored to affected users of the System.

3.14. Within 30 calendar days of the Effective date of this Order, Respondent shall submit the AWSP to EPA, for review and approval. EPA may provide comments for consideration or changes required for incorporation into the AWSP prior to EPA approval. An EPA approvable AWSP must be reached no later than 60 calendar days after the Effective date of this Order.

3.15. Once this AWSP is approved by EPA in writing, Respondent shall implement the AWSP when required by EPA. The implementation of the AWSP shall remain in effect until EPA provides written notification to Respondent that ASWP implementation is no longer required for that particular event.

3.16. Respondent shall develop an alternative water supply public notice document that provides the following information: 1) the location(s) where the alternative water supply outlined in the AWSP is available for pick up for all persons served by the System, 2) the days and hours when persons served by the System can pick up the alternative water, and 3) contact information as designated in the AWSP.

3.17. Within 30 calendar days of the Effective date of this Order, Respondent shall submit this alternate water supply public notice to EPA for review and approval. EPA may require changes to this document prior to providing its approval. An EPA approvable alternative water supply public notice document must be reached no later than 60 days after the Effective date of this Order.

3.18. Once this public notice is approved by EPA in writing, Respondent shall issue this public notice in accordance with its AWSP when required by EPA.

3.19. Respondent may also be required to take additional actions to protect public health, if EPA determines circumstances require any other necessary, additional actions.

CORRECTIVE MEASURES

3.20. Within five business days of the Effective date of this Order, Respondent shall contact EPA to set up a mutually agreed upon meeting schedule. The purpose of the meetings to be scheduled pursuant to this paragraph are to accomplish the following goals: 1) provide an opportunity for Respondent and EPA to clarify requirements and timelines, 2) provide an opportunity for Respondent to report to EPA any issues, concerns, or problems it faces in complying with the terms of this Order, and 3) provide an opportunity for Respondent and EPA to maintain an open channel of communication wherein new information can be shared.

3.21. Respondent shall prepare an outline of all the requirements in the Order, how Respondent plans to meet all of the requirements of this Order, and submit this to EPA in writing at least 24 hours in advance of this first agreed upon meeting.

3.22. Within 120 calendar days of the Effective date of this Order, Respondent must prepare an engineering assessment report of the System by an independent, certified, and licensed professional engineer. This report shall include engineering assessment of: 1) the Plant with special emphasis given to the coagulation process, treatment chemicals used, and sedimentation process; and 2) the state of the System's distribution system and associated valving.

3.23. No later than five business days after its completion, Respondent shall provide this engineering assessment to EPA.

3.24. Respondent shall develop a plan based on the engineering assessment report's findings that includes a list of priorities needing repair or replacement with an associated timeline for implementation to address the System's infrastructure (and/or operational/process) needs to prevent future high turbidity events, prevent low pressure and loss of pressure events, maintain appropriate chlorine residuals entering the distribution system, and maintain an operational System capable of reliably serving safe drinking water to its users.

3.25. Within 150 calendar days of the Effective date of this Order, Respondent shall submit to EPA for review and approval a written action plan, with an associated timeline, addressing how the Respondent will accomplish the requirements a – k of Paragraph 3.26 below. The EPA may adjust the requirements and/or associated timeline, after consultation with Respondent, prior to EPA's approval.

3.26. Once EPA approves the plan and timeline for a – k of this paragraph, Respondent shall implement the plan on the timeline approved by EPA. The EPA may adjust these requirements or include additional requirements as new information becomes available.

a. Respondent shall install all automated turbidimeters with alarms and shutoff features to prevent turbidity exceedances, control coagulant dosage, and prevent disruption in filter media.

b. Respondent shall install flow meters for incoming raw water to ensure proper adjustment of coagulant dosage and water volume at every step of the treatment processes including at the lift station, coagulation feed tanks, and settling tanks.

c. Respondent shall install flow control valves for all three finished water pumps.

d. Respondent shall repair the SCADA system, known as Distributed Control Systems, to ensure proper operation of flow control, pH, temperature monitoring, disinfection dosing, and coordinated operation of all finished water pumps.

e. Respondent shall repair or replace finished water Pump #3 to ensure proper horsepower and design capacity in accordance with the System's design capacity by unit processes.

f. Respondent shall use a compatible re-agent consistent with Coagulation Standard Operating Procedure (Attachment A) to avoid coagulation feed pump failure.

g. Respondent shall perform jar testing daily as a back up to verify Coagulation SOP is effective.

h. Respondent shall make repairs to suction lift line in sampling pump at IFE #2 to ensure turbidity measurement is accurate and prevent abnormal filter operation.

i. Respondent shall perform a self-assessment of backwash process to ensure adequate cleaning of the filter media. Respondent shall use this assessment to create a Standard Operating Procedure for the Plant's backwash process.

j. Respondent shall use appropriate reagents that are compatible with the Plant's colorimeter per manufacture's recommendation.

k. Respondent shall develop and implement a Cross Connection Control Plan to control the water supply from contamination.

3.27. By June 1, 2019, Respondent shall complete removal of settled solids from

sedimentation tank.

3.28. Within 30 calendar days of the Effective date of this Order, Respondent shall implement its Coagulation Standard Operating Procedure (Attachment A) developed for the Plant.

3.29. By July 1, 2019, Respondent shall upgrade river intake air scour system to provide for appropriate operation.

REPORTING

3.30. Within five business days the Effective date of this Order, Respondent must submit weekly updates to EPA on the progress for all corrective measures and increased operation and maintenance procedures required above. These reports may be submitted to Adam Baron via phone at (206) 553-6361 or e-mail to baron.adam@epa.gov.

3.31. Notices or reports, except for Paragraph 3.30 above, required by this Order shall be submitted to Adam Baron by email to baron.adam@epa.gov or in hardcopy to the address below:

U.S. EPA – Region 10
Enforcement and Compliance Assurance Division
Attn: Adam Baron, Mail Stop 20-CO4
1200 Sixth Avenue Suite 155
Seattle, WA 98101-3140

GENERAL PROVISIONS

3.32. This Order shall constitute final agency action by EPA. Respondent may seek federal judicial review of this Order under SDWA Section 1448(a).

3.33. EPA may modify this Order. The EPA will communicate any modification(s) to Respondent in writing and they shall be incorporated into this Order.

3.34. This Order does not relieve Respondent from its obligation to comply with

applicable federal, state, or local law.

3.35. Pursuant to SDWA Section 1431(b), 42 U.S.C. § 300i, in the event Respondent violates, fails or refuses to comply with any of the terms or provisions of this Order, EPA may commence a civil action in U.S. District Court to require compliance with this Order and to assess a civil penalty of up to $23,963 per day of violation under SDWA, as adjusted by the Federal Civil Penalties Inflation Adjustment Act of 1990, amended by the Debt Collection Improvement Act of 1996, and the subsequent Civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19.

3.36. The EPA reserves all rights against the Respondent and all other persons to take any further civil, criminal, or administrative enforcement action pursuant to any available legal authority. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional actions as EPA may deem necessary, and/or from requiring Respondent in the future to perform additional activities pursuant to SDWA or any other applicable law.

3.37. The EPA further expressly reserves the right both to disapprove work performed by the Respondent and to request or order the Respondent to perform tasks in addition to those detailed in the Order.

3.38. The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated, to the satisfaction of EPA, that the terms of this Order, including any additional tasks determined by EPA to be required under this Order or any continuing obligation or promises, have been satisfactorily completed.

3.39. The Effective date of this Order is the date of issuance below.

Issued: 5/23/2019.

Edward J. Kowalski, Director
Enforcement and Compliance Assurance Division